

RECEIVED  
CENTRAL FAX CENTER

JUL 18 2007

REMARKS

The instant application is a national filing of PCT patent publication WO 02/068367 (PCT/US02/06339). The application claims priority to three US provisional applications; 60/271,588, 60/271,590, and 60/271,591 all filed on February 26, 2001.

The amendments to claims 1 and 2 are to disclaim compounds disclosed in US Patent No. 6,194,350 and its continuation-in-part US Patent No. 6,365,549. (See *In re Johnson and Farnham*, 194 USPQ, 187 (1977)) Rather than disclaiming the compounds disclosed in US Patents 6,194,350 and 6,365,549 via a negative limitation or proviso, Applicants have added the positive limitation that in the compounds: "at least one of R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> comprises an E, G, or J group..." This fully distinguishes the claimed compounds from those disclosed in US Patents 6,194,350 and 6,365,549.

The following comments relate to the rejections detailed in the prior Final Office Action and which were maintained in the subsequent Advisory Action.

Rejection under 35 USC §112 - first paragraph

Claim 1 is rejected under 35 USC §112 - first paragraph because the specification: "...while being enabling for certain compounds, does not reasonably provide enablement for all the compounds as claimed." The Office Action states that the factors to be considered indetermining whether a disclosure meets the enablement requirment of 35 USC §112 - first paragraph have been described in *In re Wands*, 8 USPQ2nd 1400 (Fed. Cir. 1988) and that the instant application fails to meet a number of those factors, specifically (2) there is a lack of predictability in the art citing *In re Marzocchi*, 439 F.2d 220, 223-24, 169 USPQ 67, 69-70 (CCPA 1971), (3) the claims are very broad, (4) the amount of direction presented, (5) presence or absence of working examples, and (6) quantity of experimentation necessary.

Applicants contend that each of these factors, in fact, have been met by the disclosure of the instant application. Specifically:

(2) Predictability

It is known within the art surrounding cyclopropene compounds that certain of them may have ethylene inhibition activity when contacted with plants or plant products. Many of these

effects are documented in the references cited in applicant's Information Disclosure Statements. What was not known from those prior disclosures was the breadth of substituent groups which could be used to provide the cyclopropene compounds with this activity. Applicants have discovered that the scope of active compounds goes far beyond those disclosed in the cited references. Applicants have shown through the **eighty-six example compounds** tested that a wide variety of compounds with widely varying substituents are active. These example compounds support the fact that within classes of substituent groups one skilled in the art can predict that certain compounds which are members of those classes will be active. Applicants are not required to present any examples at all, and the C.C.P.A. has stated in *In re Marzocchi*, 439 F.2d at 223, that the claims may be supported "either by the use of illustrative examples or by broad terminology." Applicants respectfully submit that the teachings of their application provide the required support for the claims.

It is important to note that the Patent Office's position in *In re Wands* was that the claimed antibodies that fell within the claims with high-affinity IgM activity came from only 2 of 10 fusion experiments (*In re Wands* 858 F.2d 731, 739). That is, only 20% of the examples actually worked. This low percentage supported the Patent Office's conclusion that the appellants' methods were unpredictable. Applicants, on the other hand, have shown through their testing of eighty-six example compounds that all are active. These data strongly support Applicants' position that once you have identified a class of cyclopropenes with the expected activity, you can predict that other members of the class will also be active. Applicants have identified such classes of compounds in the instant application. Applicants have provided considerably more than a single embodiment to support their claims; Applicants have provided eighty-six.

### (3) Breadth of Claims

Admittedly, the claims of the instant application are broad. However, as noted above, Applicants have provided a large number of example compounds (eighty-six) which: "...differ radically in their properties..." and which are demonstrated in the test results in the Specification, Table 3, pages 70-72 to "accomplish the desired result."

### (4) Amount of Direction or Guidance Presented

The Office Action in states that there is no guidance or direction presented to enable one skilled in the art to make any one of the thousands of cyclopropene compounds as claimed. On the contrary, Applicants have provided eight general synthesis methods and references to many

others. In addition, Applicants have provided fifty-six specific synthesis examples and an additional thirty which are described. These extensive methods of synthesis and synthesis examples are provided in the Specification page 12, line 27 to page 69, line 1. With the information provided, one skilled in the art of organic synthesis would easily be able to synthesize any one of the claimed compounds without undue experimentation.

(5) Presence or Absence of Working Examples

The Office Action states that there are no examples presented to enable one skilled in the art to make any one of the thousands of cyclopropene compounds as claimed. As noted above, there are presented in the Specification a reasonable number of specific working examples (56) and references to a large number of synthesis methods. These are sufficient to enable one skilled in the art of organic synthesis to make the claimed compounds.

(6) The Quantity of Experimentation Necessary

The Office Action states that there is no guidance and/or direction provided by the Applicants for the wide variety of compounds and their preparation and method of use. However, as noted above, eighty-six example compounds are provided with the results of their use. These data are presented in the synthesis examples (pp 12-69 of the Specification and the test data presented on pp 69-72 of the Specification. The Office Action does not present facts to support the assertion that "undue experimentation" would be required to practice the present invention. Rejection of claims as being non-enabled requires "the Patent Office, whenever a rejection on this basis is made, to explain why it doubts the truth or accuracy of any statement in a supporting disclosure and to back up assertions of its own with acceptable evidence or reasoning" refuting the asserted teaching of the invention. *In re Marzocchi*, 439 F.2d 220, 224 (C.C.P.A. 1971). The Office has not met its burden to provide such evidence or reasoning. "However, specific technical reasons are always required." M.P.E.P. § 2164.04. The rejection merely states that there are not "sufficient working examples" to support the claims. However, Applicants are not required to present any examples at all, and the C.C.P.A. has stated that the claims may be supported "either by the use of illustrative examples or by broad terminology." *In re Marzocchi*, 439 F.2d at 223. Applicants respectfully submit that the teachings of their application provide the required support for the claims. The mere assertion that there is not "a sufficient number of compounds to support the relatively broad claims" has been rejected previously by the Board of Patent Appeals and Interferences, which reversed such an enablement rejection as "not supported by evidence, facts or sound scientific reasoning." *Ex parte Reese*, 40 U.S.P.Q.2d 1221 (B.P.A.I. 1996).

*In re Wands* specifically states that "...a considerable amount of experimentation is permissible, if it is merely routine". Applicants have provided in the Specification methods to determine the biological activity of any particular compound which are easily conducted on a routine basis. Thus, it would not be undue experimentation to determine if any particular compound possessed the desired biological activity.

#### **Rejection under 35 USC § 102(b)**

Claim 1 is rejected under 35 USC § 102(b) as being anticipated by Kostansek, U. S. Patent No. 6,548,448 ("Kostansek").

Kostansek was filed on February 26, 2002 with a priority date of February 26, 2001. As noted above, the instant application is a national filing of PCT patent publication WO 02/068367 (PCT/US02/06339). The application claims priority to three US provisional applications; 60/271,588, 60/271,590, and 60/271,591 all filed on February 26, 2001. Thus, Kostansek is not a valid 35 USC § 102(b) reference.

#### **Double Patenting - First Rejection (Kostansek)**

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Kostansek, U.S. 6,548,448 in that the instant compounds are taught by Kostansek.

Applicants are claiming certain compounds and methods of use. Kostansek claims a specific type of delivery system for cyclopropene compounds which comprises a combination of the cyclopropene compounds and packaging materials. The cyclopropene compounds claimed in Kostansek overlap with those claimed in Applicants' application. However, there are a large number of cyclopropene compounds claimed in Kostansek which are outside of Applicants' claims. Thus, Kostansek's invention could be practiced without utilizing Applicants' claimed compounds and, therefore, is patentably distinct from Applicants' invention. Furthermore, as the filing dates of Applicants' application and Kostansek are the same, Applicants would not obtain an unjust extension of the right to exclude by the grant of Applicants' claims.

#### **Double Patenting - Second Rejection (Lamola et al)**

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7-10 Lamola et al, U.S. 6,770,600 ("Lamola") in that the instant compounds are taught by the prior art.

Again, Applicants respectfully submit that Lamola is not valid prior art against the instant application. Lamola was filed on February 28, 2003 with a priority date of February 27, 2002. Applicants' priority date is a year earlier. In addition, the claims of Applicants' invention are patentably distinct from those of Lamola. Applicants are claiming certain compounds and methods of use. Lamola claims a specific type of delivery system for cyclopropene compounds which comprises a combination of the cyclopropene compounds and a substrate coated with a composition comprising the cyclopropene which, when exposed to a release agent generates a free cyclopropene. The cyclopropene compounds claimed in Lamola overlap with those claimed in Applicants' application. However, there are a large number of cyclopropene compounds claimed in Lamola which are outside of Applicants' claims. Thus, Lamola's invention could be practiced without utilizing Applicants' claimed compounds and, therefore, is patentably distinct from Applicants' invention. Furthermore, as the filing date of Applicants' application preceeds that of Lamola, Applicants would not obtain an unjust extension of the right to exclude by the grant of Applicants' claims.

However, in order to advance prosecution of this Application, should the other grounds of rejection be overcome and the obviousness-type double patenting rejection is maintained, Applicants would agree to timely file the appropriate terminal disclaimers to overcome the two double patenting rejections.

With this response, Applicants believe that the prior rejections have been overcome and the claims are in condition for allowance. Should the Examiner have any suggestions which may put the Application in better condition for allowance, Applicants' attorney is willing to discuss any such suggestions either by phone or at the U. S. Patent and Trademark Office.

Respectfully submitted,



Thomas D. Rogerson  
Attorney for Applicants  
Registration No. 38,602  
Telephone: 215-619-1569

Patent Department, 7<sup>th</sup> Floor  
Rohm and Haas Company  
100 Independence Mall West  
Philadelphia, PA 19106-2399  
Date: July 18, 2007